VOLUME XXVII

INDEX OF PAPERS BY AUTHORS

Author	*Title*	*Page*
ABARBANEL, S. & GOTTLIEB, D.	Higher Order Accuracy Finite Difference Algorithms for Quasi-Linear, Conservation Law Hyperbolic Systems	505
ABERTH, OLIVER	Iteration Methods for Finding all Zeros of a Polynomial Simultaneously	339
AHRENS, J. H. & DIETER, U.	Extensions of Forsythe's Method for Random Sampling from the Normal Distribution	927
AMOS, D. E.	Bounds on Iterated Coerror Functions and Their Ratios	413
ANDRIA, GEORGE D., BYRNE, GEORGE D. & HILL, DAVID R.	Integration Formulas and Schemes Based on g-Splines	831
BABUŠKA, IVO	The Finite Element Method with Penalty	221
BAKER, GARTH A.	Simplified Proofs of Error Estimates for the Least Squares Method for Dirichlet's Problem	229
BJÖRCK, ÅKE & GOLUB, GENE H.	Numerical Methods for Computing Angles Between Linear Subspaces	579
BLACKBURN, JOHN E., CRAPO, HENRY H. & HIGGS, DENIS A.	A Catalogue of Combinatorial Geometries	155
BOYD, DAVID W.	An Algorithm for Generating the Sphere Coordinates in a Three-Dimensional Osculatory Packing	369
BRAESS, DIETRICH	Chebyshev Approximation by Exponentials on Finite Subsets	327
BRAMBLE, J. H. & OSBORN, J. E.	Rate of Convergence Estimates for Nonselfadjoint Eigenvalue Approximations	525
BRANDT, ACHI	Generalized Local Maximum Principles for Finite-Difference Operators	685
BRENT, RICHARD P.	The First Occurrence of Large Gaps Between Successive Primes	959
BROWN, H., NEUBÜSER, J. & ZASSENHAUS, H.	On Integral Groups. III: Normalizers	167
BROWNING, GERALD, KREISS, HEINZ-OTTO & OLIGER, JOSEPH	Mesh Refinement	29
BRUDNO, SIMCHA	See: ROSE, KERMIT & BRUDNO, SIMCHA	491
BUTCHER, J. C.	The Order of Numerical Methods for Ordinary Differential Equations	793
BUZBEE, B. L. & CARASSO, ALFRED	On the Numerical Computation of Parabolic Problems for Preceding Times	237
BYRNE, GEORGE D.	See: ANDRIA, GEORGE D., BYRNE, GEORGE D. & HILL, DAVID R.	831
CANNON, JOHN J., DIMINO, LUCIEN A., HAVAS, GEORGE & WATSON, JANE M.	Implementation and Analysis of the Todd-Coxeter Algorithm	463
CARASSO, ALFRED	See: BUZBEE, B. L. & CARASSO, ALFRED	237
CARRANO, F. M.	A Modified Bairstow Method for Multiple Zeros of a Polynomial	781
CASLIN, JAMES C.	See: FEITIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	401

Author	*Title*	*Page*
CASLIN, JAMES C.	See: FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	409
CASTLETON, R. N. & GRIMM, L. J.	A First Order Method for Differential Equations of Neutral Type	571
CHAMAYOU, JEAN-MARIE-FRANÇOIS	A Probabilistic Approach to a Differential-Difference Equation Arising in Analytic Number Theory	197
CHISHOLM, J. S. R.	Rational Approximants Defined from Double Power Series	841
CHORIN, ALEXANDRE JOEL	Accurate Evaluation of Wiener Integrals	1
CODY, W. J., STRECOK, ANTHONY J. & THACHER, HENRY C., JR.	Chebyshev Approximations for the Psi Function	123
COHEN, EDGAR A., JR.	Polynomial Approximation of a Function and Its First Derivative in Near Minimax Norms	817
CRAMER, KENNETH R.	See: FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	401
CRAMER, KENNETH R.	See: FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	409
CRAPO, HENRY H.	See: BLACKBURN, JOHN E., CRAPO, HENRY H. & HIGGS, DENIS A.	155
DANLOY, BERNARD	Numerical Construction of Gaussian Quadrature Formulas for $\int_0^1 (-\mathrm{Log}\, x)\cdot x^{\alpha}\cdot f(x)\cdot dx$ and $\int_0^{\infty} E_m(x)\cdot f(x)\cdot dx$	861
DIETER, U.	See: AHRENS, J. H. & DIETER, U.	927
DIMINO, LUCIEN A.	See: CANNON, JOHN J., DIMINO, LUCIEN A., HAVAS, GEORGE & WATSON, JANE M.	463
DOUGLAS, JIM, JR. & DUPONT, TODD	A Finite Element Collocation Method for Quasilinear Parabolic Equations	17
DUPONT, TODD	See: DOUGLAS, JIM, JR. & DUPONT, TODD	17
DUSHANE, THEODORE E.	Convergence for a Vortex Method for Solving Euler's Equation	719
DUTT, J. E., LIN, T. K. & TAO, L. C.	New Approximations to Familiar Functions	939
EISENHART, LAURANCE C. & TRAPP, GEORGE E., JR.	Computation of Hermite Polynomials	625
ERDELSKY, P. J.	Computing the Brouwer Degree in R^3	133
FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	Complex Zeros of the Error Function and of the Complementary Error Function	401
FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	Saddle Points of the Complementary Error Function	409
FORD, WILLIAM H. & TING, T. W.	Stability and Convergence of Difference Approximations to Pseudo-Parabolic Partial Differential Equations	737
FORNBERG, B.	On the Instability of Leap-Frog and Crank-Nicolson Approximations of a Nonlinear Partial Differential Equation	45
GOLDBERG, MOSHE	A Note on the Stability of an Iterative Finite-Difference Method for Hyperbolic Systems	41
GOLUB, GENE H.	See: BJÖRCK, ÅKE & GOLUB, GENE H.	579
GOTTLIEB, D.	See: ABARBANEL, S. & GOTTLIEB, D.	505
GRIMM, L. J.	See: CASTLETON, R. N. & GRIMM, L. J.	571
GUZEK, JOSEPH A. & KEMPER, GENE A.	A New Error Analysis for a Cubic Spline Approximate Solution of a Class of Volterra Integro-Differential Equations	563
HAGIS, PETER, JR.	A Lower Bound for the Set of Odd Perfect Numbers	951

Author	*Title*	*Page*
HAGIS, PETER, JR. & MCDANIEL, WAYNE L.	On the Largest Prime Divisor of an Odd Perfect Number	955
HAVAS, GEORGE	See: CANNON, JOHN J., DIMINO, LUCIEN A., HAVAS, GEORGE & WATSON, JANE M.	463
HAYS, RICHARD O.	Multi-Dimensional Extensions of the Chebyshev Polynomials	621
HETHERINGTON, J. H.	Note on Error Bounds for Numerical Integration	307
HIGGS, DENIS A.	See: BLACKBURN, JOHN E., CRAPO, HENRY H. & HIGGS, DENIS A.	155
HILBERT, STEPHEN	A Mollifier Useful for Approximations in Sobolev Spaces and Some Applications to Approximating Solutions of Differential Equations	81
HILL, DAVID R.	See: ANDRIA, GEORGE D., BYRNE, GEORGE D. & HILL, DAVID R.	831
DE HOOG, FRANK & WEISS, RICHARD	Asymptotic Expansions for Product Integration	295
HOSKINS, W. D.	Boundary Expansions for Spline Interpolation	829
HOWELL, JO ANN	An Algorithm for the Exact Reduction of a Matrix to Frobenius Form Using Modular Arithmetic. I	887
HOWELL, JO ANN	An Algorithm for the Exact Reduction of a Matrix to Frobenius Form Using Modular Arithmetic. II	905
HUDSON, RICHARD H.	A Note on Dirichlet Characters	973
JOHNSON, WELLS	On the Vanishing of the Iwasawa Invariant μ_p for $p < 8000$	387
KAMMLER, DAVID W.	Chebyshev Polynomials Corresponding to a Semi-Infinite Interval and an Exponential Weight Factor	633
KEMPER, GENE A.	See: GUZEK, JOSEPH A. & KEMPER, GENE A.	563
KREISS, HEINZ-OTTO	See: BROWNING, GERALD, KREISS, HEINZ-OTTO & OLIGER, JOSEPH	29
KROPP, T. E.	See: LINZ, PETER & KROPP, T. E.	871
LANDER, L. J.	Three Thirteens	397
LARDY, L. J.	An Extrapolated Gauss-Seidel Iteration for Hessenberg Matrices	921
LAURENZI, BERNARD J.	Derivatives of Whittaker Functions $W_{\kappa,1/3}$ and $M_{\kappa,1/3}$ with Respect to Order κ	129
LEE, C. M. & ROBERTS, F. D. K.	A Comparison of Algorithms for Rational l_∞ Approximation	111
LETHER, F. G.	Cubature Error Bounds for Analytic Functions	655
LIN, T. K.	See: DUTT, J. E., LIN, T. K. & TAO, L. C.	939
LINZ, PETER & KROPP, T. E.	A Note on the Computation of Integrals Involving Products of Trigonometric and Bessel Functions	871
LYNESS, J. N. & PURI, K. K.	The Euler-Maclaurin Expansion for the Simplex	273
MACLEOD, MALCOLM A.	Improved Computation of Cubic Natural Splines with Equi-Spaced Knots	107
MADSEN, NIEL K.	A Posteriori Error Bounds for Numerical Solutions of the Neutron Transport Equations	773
MCALLISTER, G. T. & SABOTKA, E. F.	Discrete Green's Functions	59
MCDANIEL, WAYNE L.	See: HAGIS, PETER, JR. & MCDANIEL, WAYNE L.	955
MCNOLTY, FRANK	Some Probability Density Functions and Their Characteristic Functions	495
MICULA, G.	Approximate Solution of the Differential Equation $y'' = f(x, y)$ with Spline Functions	807
MORRIS, P. A.	Computational Problems in S-Function Theory	965

Author	*Title*	*Page*
MUNTEANU, M. J. & SCHUMAKER, L. L.	On a Method of Carasso and Laurent for Constructing Interpolating Splines	317
NETRAVALI, ARUN N.	Spline Approximation to the Solution of the Volterra Integral Equation of the Second Kind	99
NEUBÜSER, J.	See: BROWN, H., NEUBUSER, J. & ZASSENHAUS, H.	167
NEWBERY, A. C. R.	Error Analysis for Fourier Series Evaluation	639
NOSRATI, H.	A Modified Butcher Formula for Integration of Stiff Systems of Ordinary Differential Equations	267
OLIGER, JOSEPH	See: BROWNING, GERALD, KREISS, HEINZ-OTTO & OLIGER, JOSEPH	29
OREN, SHMUEL S.	Self-Scaling Variable Metric Algorithms Without Line Search for Unconstrained Minimization	873
OSBORN, J. E.	See: BRAMBLE, J. H. & OSBORN, J. E.	525
PAIGE, C. C.	An Error Analysis of a Method for Solving Matrix Equations	355
PAGE, R. L.	On Computing Some Extremal Periodic Positive-Definite Functions	345
PEREYRA, V. & SCHERER, G.	Efficient Computer Manipulation of Tensor Products with Applications to Multidimensional Approximation	595
PETTY, J. V.	A Winding Number Algorithm for Closed Polygonal Paths	333
PHILLIPS, JAMES L.	Error Analysis for Direct Linear Integral Equation Methods	849
PRUESS, STEVEN A.	Solving Linear Boundary Value Problems by Approximating the Coefficients	551
PURI, K. K.	See: LYNESS, J. N. & PURI, K. K.	273
RHEINBOLDT, WERNER C. & VANDERGRAFT, JAMES S.	A Simple Approach to the Perron-Frobenius Theory for Positive Operators on General Partially-Ordered Finite-Dimensional Linear Spaces	139
TE RIELE, H. J. J.	A Note on the Catalan-Dickson Conjecture	189
RISSANEN, J.	Algorithms for Triangular Decomposition of Block Hankel and Toeplitz Matrices with Application to Factoring Positive Matrix Polynomials	147
ROBERTS, F. D. K.	See: LEE, C. M. & ROBERTS, F. D. K.	111
ROSE, KERMIT & BRUDNO, SIMCHA	More About Four Biquadrates Equal One Biquadrate	491
SABOTKA, E. F.	See: MCALLISTER, G. T. & SABOTKA, E. F.	59
SAG, T. W. & WAMSLEY, J. W.	On Computing the Minimal Number of Defining Relations for Finite Groups	361
SALKAUSKAS, K.	Almost-Interpolatory Chebyshev Quadrature	645
SCHERER, G.	See: PEREYRA, V. & SCHERER, G.	595
SCHUMAKER, L. L.	See: MUNTEANU, M. J. & SCHUMAKER, L. L.	317
SERAFIN, RICHARD	See: SHANKS, DANIEL & SERAFIN, RICHARD	183
SHAMPINE, L. F.	Local Extrapolation in the Solution of Ordinary Differential Equations	91
SHANKS, DANIEL & SERAFIN, RICHARD	Quadratic Fields with Four Invariants Divisible by 3	183
SHAPIRO, HAROLD N.	Integer Vectors with Interprimed Components	455
SPIRA, ROBERT	Calculation of the Ramanujan τ-Dirichlet Series	379
STAHNKE, WAYNE	Primitive Binary Polynomials	977
STAUDUHAR, RICHARD P.	The Determination of Galois Groups	981
STRECOK, ANTHONY J.	See: CODY, W. J., STRECOK, ANTHONY J. & THACHER, HENRY C., JR.	123
TAO, L. C.	See: DUTT, J. E., LIN, T. K. & TAO, L. C.	939
TING, T. W.	See: FORD, WILLIAM H. & TING, T. W.	737
THACHER, HENRY C., JR.	See: CODY, W. J., STRECOK, ANTHONY J. & THACHER, HENRY C., JR.	123
TRAPP, GEORGE E., JR.	See: EISENHART, LAURANCE C. & TRAPP, GEORGE E., JR.	625

Author	*Title*	*Page*
TROESCH, B. A.	Elliptical Membranes with Smallest Second Eigenvalue	767
TROESCH, B. A. & TROESCH, H. R.	Eigenfrequencies of an Elliptic Membrane	755
TROESCH, H. R.	See: TROESCH, B. A. & TROESCH, H. R.	755
TUCKERMAN, BRYANT	A Search Procedure and Lower Bound for Odd Perfect Numbers	943
TURKEL, ELI	Symmetrization of the Fluid Dynamic Matrices with Applications	729
VANDERGRAFT, JAMES S.	See: RHEINBOLDT, WERNER C. & VANDERGRAFT, JAMES S.	139
VENIT, STEWART	Mesh Refinements for Parabolic Equations of Second Order	745
WAMSLEY, J. W.	See: SAG, T. W. & WAMSLEY, J. W.	361
WATSON, G. A.	The Calculation of Best Linear One-Sided L_p Approximations	607
WATSON, JANE M.	See: CANNON, JOHN J., DIMINO, LUCIEN A., HAVAS, GEORGE & WATSON, JANE M.	463
WEBB, WILLIAM A.	Numerical Results for Waring's Problem in GF[q, x]	193
WEISS, RICHARD	See: DE HOOG, FRANK & WEISS, RICHARD	295
WONG, R.	An Asymptotic Expansion of $W_{k,m}(z)$ with Large Variable and Parameters	429
WRIGGE, H. S.	An Elliptic Integral Identity	839
WUNDERLICH, M. C.	On the Gaussian Primes on the Line $\mathrm{Im}(X) = 1$	399
ZASSENHAUS, J.	See: BROWN, H., NEUBÜSER, J. & ZASSENHAUS, H.	167

SUBJECT CLASSIFICATION SYSTEM FOR INDEX OF REVIEWS

The following subject classification system is used for the yearly index of reviews. Individual reviews in the quarterly issues are assigned index classification numbers in simplified form (see MOC, vol. 22, no. 101).

1.00 Biography and Bibliography (History)

2.00 Selected Topics in Numerical Analysis

2.05 *Approximation Theory*
- 2.05.1 *Least Squares, Curve Fitting, Harmonic Analysis*
- 2.05.2 *Chebyshev (Best) Approximation*
- 2.05.3 *Interpolation, Extrapolation*
- 2.05.4 *Inverse Interpolation*
- 2.05.5 *Rational Approximation*

2.10 *Numerical Integration*
- 2.10.1 *One-Dimensional*
- 2.10.2 *Multi-Dimensional*
- 2.10.3 *Monte Carlo*

2.15 *Numerical Differentiation*
2.20 *Roots of Equations*
2.25 *Evaluation of Series*
2.30 *Continued Fractions*
2.35 *Iteration Methods, Acceleration Techniques*
2.40 *Differences, Divided Differences*
2.45 *Algorithms, General Theory*
2.50 *Inequalities*
2.55 *Stability of Computation, Significance Arithmetic*

3.00 Linear Algebra

3.05 *Matrices*
3.10 *Linear Equations*
- 3.10.1 *Error Analysis*

3.15 *Eigenvalues and Eigenvectors*
- 3.15.1 *Error Analysis*

3.20 *Matrix Inversion and Pseudo-Inverses*
- 3.20.1 *Error Analysis*

3.25 *Linear and Nonlinear Programming, Theory of Games*
- 3.25.1 *Error Analysis*

3.30 *Determinants*

4.00 Ordinary Differential Equations

4.05 *Initial Value Problems*
- 4.05.1 *Analytic Methods*
  - 4.05.1.1 *Error Analysis*
- 4.05.2 *One-Step Methods*
  - 4.05.2.1 *Error Analysis*
- 4.05.3 *Multistep Methods*
  - 4.05.3.1 *Error Analysis*

4.10 *Linear Boundary Value and Eigenvalue Problems*
- 4.10.1 *Analytic Methods*
  - 4.10.1.1 *Error Analysis*

4.10.2 *Initial Value (Trial and Error or Shooting) Methods*
4.10.2.1 *Error Analysis*
4.10.3 *Finite Difference (Nonshooting) Methods*
4.10.3.1 *Error Analysis*
4.15 *Nonlinear Boundary Value and Eigenvalue Problems*
4.15.1 *Analytic Methods*
4.15.1.1 *Error Analysis*
4.15.2 *Initial Value (Trial and Error or Shooting) Methods*
4.15.2.1 *Error Analysis*
4.15.3 *Finite Difference (Nonshooting) Methods*
4.15.3.1 *Error Analysis*

5.00 Partial Differential Equations

5.05 *Initial Value Problems*
5.05.1 *Analytic Methods*
5.05.1.1 *Error Analysis*
5.05.2 *Explicit Difference Methods*
5.05.2.1 *Error Analysis*
5.05.3 *Implicit Difference Methods, Iterative Schemes*
5.05.3.1 *Error Analysis*
5.05.4 *Other Approximation Methods*
5.05.4.1 *Error Analysis*
5.10 *Boundary Value Problems*
5.10.1 *Analytic Methods*
5.10.1.1 *Error Analysis*
5.10.2 *Finite Difference Methods, Iterative Schemes*
5.10.2.1 *Error Analysis*
5.10.3 *Other Approximation Methods*
5.10.3.1 *Error Analysis*
5.15 *Eigenvalue Problems*
5.15.1 *Analytic Methods*
5.15.1.1 *Error Analysis*
5.15.2 *Finite Difference Methods, Iterative Schemes*
5.15.2.1 *Error Analysis*
5.15.3 *Other Approximation Methods*
5.15.3.1 *Error Analysis*
5.20 *Mixed Initial and Boundary Value Problems*
5.20.1 *Analytic Methods*
5.20.1.1 *Error Analysis*
5.20.2 *Explicit Difference Methods*
5.20.2.1 *Error Analysis*
5.20.3 *Implicit Difference Methods, Iterative Schemes*
5.20.3.1 *Error Analysis*
5.20.4 *Other Approximation Methods*
5.20.4.1 *Error Analysis*

6.00 Other Functional Equations

6.05 *Difference Equations*
6.10 *Difference-Differential Equations*
6.15 *Integral Equations*
6.20 *Integro-Differential Equations*
6.25 *Convolution Equations*
6.30 *Variational Equations*
6.35 *Abstract Operator Equations*

7.00 Special Functions

7.05 *Mathematical Constants, Special Polynomials (Nonorthogonal) and Numbers: Bernoulli, Euler, Stirling, Binomial Coefficients: Factorials*
7.10 *Elementary Functions, Powers and Roots*
7.15 *Gamma Functions, Psi Functions, Zeta Functions and Related Functions*
7.20 *Incomplete Gamma Functions*
7.20.1 *Exponential Integral, Cosine and Sine Integrals and Related Functions*
7.20.2 *Error Functions, Fresnel Integrals and Related Functions*
7.25 *Confluent Hypergeometric Functions*
7.25.1 *Parabolic Cylinder Functions*
7.25.2 *Coulomb Wave Functions*
7.30 *Bessel Functions*
7.35 *Lommel Functions, Struve Functions, Anger-Weber Functions and Associated Bessel Functions*
7.40 *Legendre Functions*
7.45 *Gaussian Hypergeometric Functions*
7.50 *Orthogonal Polynomials and Functions*
7.55 *Expansions in Series of Orthogonal Polynomials, Bessel Functions, Other Functions*
7.60 *Elliptical Integrals and Functions, Weierstrass Elliptic Integrals, Related Functions*
7.65 *Mathieu Functions*
7.70 *Spheroidal Wave Functions, Other Wave Functions*
7.75 *Generalized Hypergeometric Functions of a Single Variable*
7.80 *Generalized Hypergeometric Functions of More Than One Variable*
7.85 *Basic Hypergeometric Functions*
7.90 *Integral Transforms*
7.95 *Numerical Tables of Integrals and Transforms*
7.100 *Numerical Tables of Infinite Series*
7.105 *Handbooks of Mathematical Tables and Formulae*

8.00 Probability and Statistics

8.05 *Random Numbers*
8.05.1 *Tables*
8.10 *Monte Carlo, Markov Chains*
8.15 *Multivariate Analysis*
8.20 *Regression Analysis*
8.25 *Analysis of Variance*
8.30 *Time Series Analysis*
8.35 *Nonparametric Analysis*
8.40 *Sequential Analysis*
8.45 *Classical Statistics*
8.50 *Handbooks of Tables and Formulae*

9.00 Number Theory

9.05 *Mersenne, Fermat, Perfect and Related Numbers*
9.10 *Number Theoretic Functions and Tables*
9.15 *Binomial Congruences, Primitive Roots, Residues, etc.*
9.20 *Primes and their Distribution*
9.25 *Factorization*
9.30 *Forms and Diophantine Equations*
9.35 *Continued Fractions and Diophantine Approximation*
9.40 *Normal Numbers and Distribution of Digits*
9.45 *Modular Computation*

10.00 Algebra and Combinatorial Theory

10.05 *Groups, Rings, Fields, Algebras*
10.10 *Finite Fields*

10.15 *Irreducible Polynomials*
10.20 *Arrays, Latin Squares*
10.25 *Projective Planes, Block Designs, Difference Sets*
10.30 *Permutations, Combinatorial Identities*
10.35 *Graph Theory*

11.00 Geometry

11.05 *Coordinate Conversion Tables*
11.10 *Polyhedra and Polytopes*
11.15 *Graph Theory*

12.00 Computers and Other Aids to Computation

12.05 *Digital Computers*
  12.05.1 *Coding, Programming and Software*
  12.05.2 *Design and Hardware*
12.10 *Analog Computers*
  12.10.1 *Design and Hardware*
12.15 *Digital-Analog (Hybrid) Computers*
  12.15.1 *Coding, Programming and Software*
  12.15.2 *Design and Hardware*
12.20 *Mechanical Aids to Computation—Slide Rules, Desk Calculators, Others*
12.25 *Nomographs*

13.00 Applications

13.05 *Physical and Chemical Sciences*
  13.05.1 *Weights and Measures Tables*
13.10 *Astronomy, Astrophysics*
  13.10.1 *Navigation Tables*
13.15 *Engineering Sciences*
  13.15.1 *Engineering Tables*
13.20 *Earth Sciences, Atmospheric Sciences*
  13.20.1 *Triangulation and Geodetic Tables*
13.25 *Biology and the Behavioral Sciences*
13.30 *Economics and the Social Sciences*
13.35 *Information Theory, Automata, Logic Control Theory, Dynamic Programming, Cybernetics*
13.40 *Management Problems, Data Analysis and Processing*
13.45 *Actuarial Science*
  13.45.1 *Actuarial and Financial Tables*
13.50 *Humanities, Linguistics*

14.00 Miscellaneous

14.05 *Mathematical Research, Mathematical Education*

INDEX OF REVIEWS BY AUTHOR OF WORK REVIEWED

Author	*Review Number*	*Classification*	*Page*
AGREST, M. M. & MAKSIMOV, M. S.	21	7.00, 7.30, 7.35	443
BEIZER, BORIS	12	12.05.1, 12.05.2	217
BROUSSEAU, BROTHER ALFRED, Editor	24	9.00	446
BURINGTON, R. S.	43	2.00, 3.00, 4.00, 5.00, 7.105, 8.50, 13.00	998
CASLIN, JAMES C.	22	See: FETTIS, HENRY E. & CASLIN, JAMES C.	444
CASLIN, JAMES C.	35	See: FETTIS, HENRY E. & CASLIN, JAMES C.	675
CASLIN, JAMES C.	49	See: FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	1002
CASLIN, JAMES C.	50	See: FETTIS, HENRY E. & CASLIN, JAMES C.	1003
CHAN, LAI K., CHAN, N. N. & MEAD, E. R.	23	8.00	445
CHAN, N. N.	23	See: CHAN, LAI K., CHAN, N. N. & MEAD, E. R.	445
CHERKASOVA, M. P.	45	2.20, 3.00, 4.00	999
COCHRAN, JAMES ALAN	7	6.15	213
CRAMER, KENNETH R.	49	See: FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	1002
DAY, A. COLIN	55	12.05.1	1007
DUVAUT, G. & LIONS, J. L.	15	5.00, 13.05, 13.15	440
EKMAN, TORGIL & FRÖBERG, CARL-ERIC	26	12.05.1	448
ELDRIDGE, C.	37	See: LAL, M., ELDRIDGE, C. & GILLARD, P.	676
FETTIS, HENRY E. & CASLIN, JAMES C.	22	7.60	444
FETTIS, HENRY E. & CASLIN, JAMES C.	35	7.40	675
FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	49	7.20.2	1002
FETTIS, HENRY E. & CASLIN, JAMES C.	50	7.60	1003
FINDLER, N. V. & MELTZER, B., Editors	40	13.35	678
FREVEL, LUDO K.	16	7.00	440
FREVEL, L. K. & BLUMER, T. J.	17	7.00	441
FREVEL, LUDO K.	36	8.45	675
FRÖBERG, CARL-ERIC	26	See: EKMAN, TORGIL & FRÖBERG, CARL-ERIC	448
GASTINEL, NOEL	4	3.05, 3.10, 3.15, 3.20	211
GEAR, C. WILLIAM	31	4.05.1, 4.05.3.1	673
GÉCSEG, F. & PEÁK, I.	41	13.35	679
GEL'FOND, A. O.	3	2.05, 2.40, 6.05, 7.05	210
GILLARD, C.	37	See: LAL, M., ELDRIDGE C. & GILLARD P.	676
HAGIS, PETER, JR.	53	9.05	1005
HOCHSTADT, HARRY	20	7.00, 7.05, 7.15, 7.40, 7.70, 7.85	443
JACOBY, S. L. S., KOWALIK, J. S. & PIZZO, J. T.	46	2.35, 3.25	1000
KARMAZINA, L. N.	48	7.00	1001
KOWALIK, J. S.	46	See: JACOBY, S. L. S., KOWALIK, J. S. & PIZZO, J. T.	1000
LAL, M., ELDRIDGE, C. & GILLARD, P.	37	9.10	676
LAND, NORMAN S.	39	13.15	677
LUCCIONI, RAÚL	34	7.30	674
LUNELLI, M., Editor	29	3.00	670
LUKE, YUDELL L.	13	2.05, 2.30, 2.55, 7.00	437

Author	Review Number	Classification	Page
MAKSIMOV, M. S.	21	See: AGREST, M. M. & MAKSIMOV, M. S.	443
MARTZ, C. WILLIAM	8	7.20.2	214
MAURER, WARD DOUGLAS	27	12.05.1	449
MEAD, E. R.	23	See: CHAN, LAI K., CHAN, N. N. & MEAD, E. R.	445
MELTZER, B.	40	See: FINDLER, N. V. & MELTZER, B., Editors	678
MILLER, KATHRYN	25	9.00	447
MORRIS, ALFRED H., JR.	32	7.15	673
MORRIS, ALFRED H., JR.	33	7.15	674
MORRIS, P. A.	11	10.35	216
MORRIS, P. A.	54	10.35	1006
NEWMAN, MORRIS	9	9.10	215
ORTEGA, JAMES M.	28	2.35, 3.10.1, 3.15.1, 4.05.3.1, 4.10.3.1	669
PEÁK, I.	41	See: GÉCSEG, F. & PEÁK, I.	679
PIZZO, J. T.	46	See: JACOBY, S. L. S., KOWALIK, J. S. & PIZZO, J. T.	1000
REID, J. K., Editor	5	3.10, 3.25	212
REINSCH, C.	30	See: WILKINSON, J. H. & REINSCH, C.	670
ROBERTS, SANFORD M. & SHIPMAN, JEROME S.	6	4.15.2	213
ROBINSON, H. P.	44	2.20	999
SARD, ARTHUR & WEINTRAUB, SOL	1	2.05	205
SCHATZ, JOSEPH A.	42	1.00	997
SCHÖNHAGE, ARNOLD	2	2.05	209
SHIPMAN, JEROME S.	6	See: ROBERTS, SANFORD M. & SHIPMAN, JEROME S.	213
SLAVIĆ, DUŠAN V.	18	7.00	441
SLAVIĆ, DUŠAN V.	19	7.00	442
STROUD, A. H.	14	2.10	437
TUCKERMAN, BRYANT	51	9.05	1004
TUCKERMAN, BRYANT	52	9.05	1004
WEINTRAUB, SOL	1	See: SARD, ARTHUR & WEINTRAUB, SOL	205
WEINTRAUB, SOL	38	9.20	676
WILKINSON, J. H. & REINSCH, C.	30	3.05, 3.10.1, 3.15.1, 3.20.1	670
YATES, SAMUEL	10	9.10, 9.20	216
YOUNG, DAVID M.	47	2.35, 5.10.2.1	1001

INDEX OF REVIEWS BY SUBJECT OF WORK REVIEWED

Author	Review Number	Title	Page
1.00 Biography and Bibliography (History)			
SCHATZ, JOSEPH A.	42	A Mathematics Citation Index	997
2.00 Selected Topics in Numerical Analysis			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998
2.05 *Approximation Theory*			
GEL'FOND, A. O.	3	Calculus of Finite Differences	210

Author	Review Number	Title	Page
LUKE, YUDELL L.	13	On Generating Bessel Functions by Use of the Backward Recurrence Formula	437
SARD, ARTHUR & WEINTRAUB, SOL	1	A Book of Splines	205
SCHÖNHAGE, ARNOLD	2	Approximationstheorie	209
2.10 *Numerical Integration*			
STROUD, A. H.	14	Approximate Calculation of Multiple Integrals	437
2.20 *Roots of Equations*			
CHERKASOVA, M. P.	45	Problems on Numerical Methods	999
ROBINSON, H. P.	44	Roots of tan $x = x$	999
2.30 *Continued Fractions*			
LUKE, YUDELL L.	13	On Generating Bessel Functions by Use of the Backward Recurrence Formula	437
2.35 *Iteration Methods, Acceleration Techniques*			
JACOBY, S. L. S., KOWALIK, J. S. & PIZZO, J. T.	46	Iterative Methods for Nonlinear Optimization	1000
ORTEGA, JAMES M.	28	Numerical Analysis, A Second Course	669
YOUNG, DAVID M.	47	Iterative Solution of Large Linear Systems	1001
2.40 *Differences, Divided Differences*			
GEL'FOND, A. O.	3	Calculus of Finite Differences	210
2.55 *Stability of Computation, Significance Arithmetic*			
LUKE, YUDELL L.	13	On Generating Bessel Functions by Use of the Backward Recurrence Formula	437
3.00 Linear Algebra			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998
CHERKASOVA, M. P.	45	Problems on Numerical Methods	999
LUNELLI, M., Editor	29	Una Biblioteca de Sottoprogrammi dell'Algebra Lineare	670
3.05 *Matrices*			
GASTINEL, NOEL	4	Linear Numerical Analysis	211
WILKINSON, J. H. & REINSCH, C.	30	Handbook for Automatic Computation	670
3.10 *Linear Equations*			
GASTINEL, NOEL	4	Linear Numerical Analysis	211
REID, J. K., Editor	5	Large Sparse Sets of Linear Equations	212
3.10.1 *Error Analysis*			
ORTEGA, JAMES M.	28	Numerical Analysis, A Second Course	669
WILKINSON, J. H. & REINSCH, C.	30	Handbook for Automatic Computation	670
3.15 *Eigenvalues and Eigenvectors*			
GASTINEL, NOEL	4	Linear Numerical Analysis	211
3.15.1 *Error Analysis*			
ORTEGA, JAMES M.	28	Numerical Analysis, A Second Course	669
WILKINSON, J. H. & REINSCH, C.	30	Handbook for Automatic Computation	670
3.20 *Matrix Inversion and Pseudo Inverses*			
GASTINEL, NOEL	4	Linear Numerical Analysis	211
3.20.1 *Error Analysis*			
WILKINSON, J. H. & REINSCH, C.	30	Handbook for Automatic Computation	670
3.25 *Linear and Nonlinear Programming, Theory of Games*			
JACOBY, S. L. S., KOWALIK, J. S. & PIZZO, J. T.	46	Iterative Methods for Nonlinear Optimization	1000
REID, J. K., Editor	5	Large Sparse Sets of Linear Equations	212
4.00 Ordinary Differential Equations			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998

Author	Review Number	Title	Page
CHERKASOVA, M. P.	45	Problems on Numerical Methods	999
4.05 *Initial Value Problems*			
4.05.1 *Analytic Methods*			
GEAR, C. WILLIAM	31	Numerical Initial Value Problems in Ordinary Differential Equations	673
4.05.3 *Multistep Methods*			
4.05.3.1 *Error Analysis*			
GEAR, C. WILLIAM	31	Numerical Initial Value Problems in Ordinary Differential Equations	673
ORTEGA, JAMES M.	28	Numerical Analysis, A Second Course	669
4.10 *Linear Boundary Value and Eigenvalue Problems*			
4.10.3 *Finite Difference (Nonshooting) Methods*			
4.10.3.1 *Error Analysis*			
ORTEGA, JAMES M.	28	Numerical Analysis, A Second Course	669
4.15 *Nonlinear Boundary Value and Eigenvalue Problems*			
4.15.2 *Initial Value (Trial and Error or Shooting) Methods*			
ROBERTS, SANFORD M. & SHIPMAN, JEROME S.	6	Two-Point Boundary Value Problems: Shooting Methods	213
5.00 Partial Differential Equations			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998
DUVAUT, G. & LIONS, J. L.	15	Les Inéquations en Mécanique et en Physique	440
5.10 *Boundary Value Problems*			
5.10.2 *Finite Difference Methods Iterative Schemes*			
5.10.2.1 *Error Analysis*			
YOUNG, DAVID M.	47	Iterative Solution of Large Linear Systems	1001
6.00 Other Functional Equations			
6.05 *Difference Equations*			
GEL'FOND, A. O.	3	Calculus of Finite Differences	210
6.15 *Integral Equations*			
COCHRAN, JAMES ALAN	7	Analysis of Linear Integral Equations	213
7.00 Special Functions			
AGREST, M. M. & MAKSIMOV, M. S.	21	Theory of Incomplete Cylindrical Functions and Their Applications	443
FREVEL, LUDO K.	16	Evaluation of the Generalized Error Function	440
FREVEL, L. K. & BLUMER, T. J.	17	Seven-Place Table of Iterated Hyperbolic Tangent	441
HOCHSTADT, HARRY	20	The Functions of Mathematical Physics	443
KARMAZINA, L. N.	48	Tablitsy funktsii Lezhandra ot Mnimogo Argumenta (Tables of Legendre Functions of Imaginary Argument)	1001
LUKE, YUDELL L.	13	On Generating Bessel Functions by Use of the Backward Recurrence Formula	437
SLAVIĆ, DUŠAN V.	18	"Tables for functions $\Gamma(x)$ and $1/\Gamma(x)$"	441
SLAVIĆ, DUŠAN V.	19	"Tables of trigonometric functions (angle in grades)"	442
7.05 *Mathematical Constants, Special Polynomials (Nonorthogonal) and Numbers: Bernoulli, Euler, Stirling, Binomial Coefficients; Factorials*			
GEL'FOND, A. O.	3	Calculus of Finite Differences	210
HOCHSTADT, HARRY	20	The Functions of Mathematical Physics	443
7.15 *Gamma Functions, Psi Functions, Zeta Functions and Related Functions*			
HOCHSTADT, HARRY	20	The Functions of Mathematical Physics	443

Author	Review Number	Title	Page
MORRIS, ALFRED H., JR.	32	Table of the Riemann Zeta Function for Integer Arguments	673
MORRIS, ALFRED H., JR.	33	Tables of Coefficients of the Maclaurin Expansions of $1/\Gamma(z+1)$ and $1/\Gamma(z+2)$	674
7.20 Incomplete Gamma Functions			
7.20.2 Error Functions, Fresnel Integrals and Related Functions			
FETTIS, HENRY E., CASLIN, JAMES C. & CRAMER, KENNETH R.	49	An Improved Tabulation of the Plasma Dispersion Function and Its First Derivative. Part I: Argument with Positive Imaginary Part; Part II: Argument with Negative Imaginary Part: Zeros and Saddle Points	1002
MARTZ, C. WILLIAM	8	Tables of the Complex Fresnel Integral	214
7.30 Bessel Functions			
AGREST, M. M. & MAKSIMOV, M. S.	21	Theory of Incomplete Cylindrical Functions and Their Applications	443
LUCCIONI, RAÚL	34	Tables of Zeros of $hJ_0(\xi) - \xi J_1(\xi)$	674
7.35 Lommel Functions, Struve Functions, Anger-Weber Functions and Associated Bessel Functions			
AGREST, M. M. & MAKSIMOV, M. S.	21	Theory of Incomplete Cylindrical Functions and Their Applications	443
7.40 Legendre Functions			
FETTIS, HENRY E. & CASLIN, JAMES C.	35	Tables of Toroidal Harmonics, III: Functions of the First Kind—Orders 0–10	675
HOCHSTADT, HARRY	20	The Functions of Mathematical Physics	443
7.60 Elliptical Integrals and Functions, Weierstrass Elliptic Integrals, Related Functions			
FETTIS, HENRY E. & CASLIN, JAMES C.	22	A Table of the Inverse Sine-Amplitude Function in the Complex Domain	444
FETTIS, HENRY E. & CASLIN, JAMES C.	50	A Table of the Inverse Sine-Amplitude Function in the Complex Domain	1003
7.70 Spheroidal Wave Functions, Other Wave Functions			
HOCHSTADT, HARRY	20	The Functions of Mathematical Physics	443
7.85 Basic Hypergeometric Functions			
HOCHSTADT, HARRY	20	The Functions of Mathematical Physics	443
7.105 Handbooks of Mathematical Tables and Formulas			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998
8.00 Probability and Statistics			
CHAN, LAI K., CHAN, N. N. & MEAD, E. R.	23	Tables for the Best Linear Unbiased Estimate Based on Selected Order Statistics from the Normal, Logistic, Cauchy, and Double Exponential Distribution	445
8.45 Classical Statistics			
FREVEL, LUDO K.	36	Evaluation of the Generalized Binomial Density Function	675
8.50 Handbooks of Tables and Formulae			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998
9.00 Number Theory			
BROUSSEAU, BROTHER ALFRED, Editor	24	Fibonacci and Related Number Theoretic Tables	446
MILLER, KATHRYN	25	Solutions of $\phi(n) = \phi(n+1)$ for $1 \leq n \leq 500000$	447

Author	Review Number	Title	Page
9.05 *Mersenne, Fermat, Perfect and Related Numbers*			
HAGIS, PETER, JR.	53	If n is Odd and Perfect, then $n > 10^{45}$. A Case Study Proof with a Supplement in which the Lower Bound is Improved to 10^{50}	1005
TUCKERMAN, BRYANT	51	Odd Perfect Numbers: A Search Procedure, and a New Lower Bound of 10^{36}	1004
TUCKERMAN, BRYANT	52	Odd-Perfect-Number Tree to 10^{36}	1004
9.10 *Number Theoretic Functions and Tables*			
LAL, M., ELDRIDGE, C. & GILLARD, P.	37	Solutions of $\sigma(n) = \sigma(n + k)$	676
NEWMAN, MORRIS	9	A Table of $\tau(p)$ modulo p, p prime, $3 \leq p \leq 16067$	215
YATES, SAMUEL	10	Prime Period Lengths	216
9.20 *Primes and Their Distribution*			
WEINTRAUB, SOL	38	Four Tables Concerning the Distribution of Primes	676
YATES, SAMUEL	10	Prime Period Lengths	216
10.00 Algebra and Combinatorial Theory			
10.35 *Graph Theory*			
MORRIS, P. A.	11	Self-Complementary Graphs and Digraphs	216
MORRIS, P. A.	54	A Catalogue of Trees	1006
12.00 Computers and Other Aids to Computation			
12.05 *Digital Computers*			
12.05.1 *Coding, Programming and Software*			
BEIZER, BORIS	12	The Architecture and Engineering of Digital Computer Complexes, Vols. I and II	217
DAY, A. COLIN	55	Fortran Techniques, with Special Reference to Non-Numerical Applications	1007
EKMAN, TORGIL & FRÖBERG, CARL-ERIC	26	Introduction to Algol Programming	448
MAURER, WARD DOUGLAS	27	Programming: An Introduction to Computer Techniques	449
12.05.2 *Design and Hardware*			
BEIZER, BORIS	12	The Architecture and Engineering of Digital Computer Complexes, Vols. I and II	217
13.00 Applications			
BURINGTON, R. S.	43	Handbook of Mathematical Tables and Formulas	998
13.05 *Physical and Chemical Sciences*			
DUVAUT, G. & LIONS, J. L.	15	Les Inéquations en Mécanique et en Physique	440
13.15 *Engineering Sciences*			
LAND, NORMAN S.	39	A Compilation of Nondimensional Numbers	677
DUVAUT, G. & LIONS, J. L.	15	Les Inéquations en Mécanique et en Physique	440
13.35 *Information Theory, Automata, Logic Control Theory, Dynamic Programming, Cybernetics*			
FINDLER, N. V. & MELTZER, B., Editors	40	Artificial Intelligence and Heuristic Programming	678
GÉCSEG, F. & PEÁK, I.	41	Algebraic Theory of Automata	679

INDEX OF TABLE ERRATA

No.	Author	Title	Page
500	ABRAMOWITZ, MILTON & STEGUN, IRENE A., Editors	Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables	219
504	ABRAMOWITZ, MILTON & STEGUN, IRENE A., Editors	Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables	681
501	CHOONG, K. Y., DAYKIN, D. E. & RATHBONE, C. R.	Regular Continued Fractions for π and γ	451
502	ERDÉLYI, A., MAGNUS, W., OBERHETTINGER, F. & TRICOMI, F. G.	Tables of Integral Transforms, Vol. I	451
506	FLETCHER, A., MILLER, J. C. P., ROSENHEAD, L. & COMRIE, L. J.	An Index of Mathematical Tables	1009
503	GRADSHTEYN, I. S. & RYZHIK, I. M.	Table of Integrals, Series, and Products	451
507	SLAVIĆ, DUŠAN V.	"Table of trigonometric functions (angle in grades)"	1009
505	WRENCH, J. W., JR.	"Concerning two series for the Gamma function"	681

INDEX OF CORRIGENDA

Author	Title	Page
CHORIN, ALEXANDRE JOEL	"Accurate evaluation of Wiener integrals"	1011
FETTIS, HENRY E.	"An explicit inversion formula for the inverse Jacobian elliptic functions"	683
KRAVITZ, SIDNEY & MADACHY, JOSEPH S.	Divisors of Mersenne Numbers	453
NEWMAN, MORRIS	"A Table of $\tau(p)$ modulo p, p prime, $3 \leq p \leq 16067$"	683
TE RIELE, H. J. J.	"Note on the Catalan-Dickson conjecture"	1011
SHANKS, DANIEL & SERAFIN, RICHARD	"Quadratic fields with four invariants divisible by 3"	1012

INDEX OF MICROFICHE SUPPLEMENTS

Author	Title	MOC Issue
ANDRIA, GEORGE D., BYRNE, GEORGE D. & HILL, DAVID R.	Addendum to "Integration formulas and schemes based on g-splines", see p. 831 this issue	October
BLACKBURN, JOHN E., CRAPO, HENRY H. & HIGGS, DENIS A.	A Catalogue of Combinatorial Geometries	January
LEE, C. M. & ROBERTS F. D. K.	A Comparison of Algorithms for Rational l_∞ Approximation	January